

WHAT IS CLAIMED IS:

1. An isolated polypeptide comprising the enzymatic catalytic domains of 1,3-1,4- β -D-glucanase and excluding the carboxyl terminal 78 amino acid residues of the 1,3-1,4- β -D-glucanase.
2. The polypeptide of claim 1, wherein the polypeptide contains the sequence of SEQ ID NO: 7.
3. The polypeptide of claim 2, wherein the polypeptide contains the sequence of SEQ ID NO: 12.
4. The polypeptide of claim 3, wherein the polypeptide contains the sequence of SEQ ID NO: 9 or 14.
5. The polypeptide of claim 1, wherein the polypeptide contains the sequence of SEQ ID NO: 8.
6. The polypeptide of claim 5, wherein the polypeptide contains the sequence of SEQ ID NO: 12.
7. The polypeptide of claim 6, wherein the polypeptide contains the sequence of SEQ ID NO: 13 or 15.
8. The polypeptide of claim 1, wherein the polypeptide is glycosylated.
9. The polypeptide of claim 8, wherein the polypeptide contains the sequence of SEQ ID NO: 7.
10. The polypeptide of claim 9, wherein the polypeptide contains the sequence of SEQ ID NO: 12.

11. The polypeptide of claim 10, wherein the polypeptide contains the sequence of SEQ ID NO: 9 or 14.

12. The polypeptide of claim 8, wherein the polypeptide contains the sequence of SEQ ID NO: 8.

13. The polypeptide of claim 12, wherein the polypeptide contains the sequence of SEQ ID NO: 12.

14. The polypeptide of claim 13, wherein the polypeptide contains the sequence of SEQ ID NO: 13 or 15.

15. An isolated nucleic acid comprising a sequence that encodes the polypeptide of claim 1.

16. The nucleic acid of claim 15, wherein the polypeptide contains the sequence of SEQ ID NO: 7.

17. The nucleic acid of claim 16, wherein the polypeptide contains the sequence of SEQ ID NO: 12.

18. The nucleic acid of claim 17, wherein the polypeptide contains the sequence of SEQ ID NO: 9 or 14.

19. The nucleic acid of claim 15, wherein the polypeptide contains the sequence of SEQ ID NO: 8.

20. The nucleic acid of claim 19, wherein the polypeptide contains the sequence of SEQ ID NO: 12.

21. The nucleic acid of claim 20, wherein the polypeptide contains the sequence of SEQ ID NO: 13 or 15.
22. A vector comprising the nucleic acid of claim 15.
23. The vector of claim 22, wherein the polypeptide contains the sequence of SEQ ID NO: 7.
24. The vector of claim 22, wherein the polypeptide contains the sequence of SEQ ID NO: 8.
25. A host cell comprising the nucleic acid of claim 15.
26. The host cell of claim 25, wherein the host cell is a bacterium, yeast, insect, plant, or mammalian cell.
27. The host cell of claim 26, wherein the host cell is an *E. coli* or *P. pasrotis* cell.
28. A method of producing a polypeptide, the method comprising:
placing the host cell of claim 25 in a culture;
expressing the polypeptide in the host cell; and
isolating the polypeptide from the culture.